How Are Paper and Fabric Combined to Create Beautiful Items and Useful Tools?

These activities draw upon prior lessons with paper and fabric. Now let’s combine the two to demonstrate the numerous everyday items which use both materials.

Materials

Coffee filters, perforated paper embroidery, fabric swatches, cotton-paper blend playing cards, fabric-covered storage boxes, reusable shopping bags, paper money (real), cardstock, glue, scissors, pieces of fabric and trims such as lace for decorating, hole punch, yarn or ribbon.

A more detailed list can be found on Page 2.

Standards

NCECDTL, ELOF: Goal IT-ALT 3, 4, 5, 6, 7, 8, 9; Goal P-ATL 6, 7, 8, 9, 10, 11, 12, 13; Goal P-LC 1, 2, 3, 4, 5, 6, 7; Goal P-MATH 7, 8, 10; Goal P-SCI 1, 2, 4, 5, 6; Goal IT-PMP 1, 2, 3, 4, 5, 6, 7, 8; Goal P-PMP 2, 3; MI Standards SS 1, 3.

Model i Innovation Learning Framework

Throughout this lesson, there will be opportunities to bring in Model i’s Habits of an Innovator and Actions of Innovation.

More information on Model i can be found at: thf.org/education/teaching-innovation/modeli
Let’s Learn About
PAPER & FABRIC

Materials

Explore

Activity — Touch Exploration
• Clothing
• Shopping bags (paper and reuseable)
• Storage boxes (cardboard vs. fabric-lined crates or canvas bags)
• Flocked wallpaper
• Greeting cards
• Teachers can provide as many examples of paper and fabric items as possible for touch exploration

Discover

Activity — What Around Our Classroom Is Made of Paper and Fabric?
• Fabric-covered storage boxes
• Baseball caps/visors
• Toys
• Books
• Pull-down classroom maps
• Book bags
• Brown paper bags
• Paper money (real)
• Wall decorations

Create

Project Two — Bookmarks
• Cardstock
• Fabric scraps, large enough to cover cardstock strips
• Hole punch
• Yarn or ribbon
• Scissors

Project Three — Bracelets
• Toilet paper tubes
• Fabric scraps
• Glue
• Scissors

Project Four — Toilet Paper Tube Owls
• Toilet paper tubes
• Fabric scraps
• Yellow or orange construction paper for beak
• White and black construction paper or googly eyes
• Glue
• Scissors
• Pencil
Let’s Learn About

PAPER & FABRIC

Lesson Guide

Explore
Stay Curious, Collaborate, Uncover
Compare, Contrast, Combine
What Can Be Made with Paper and Fabric? .................. Page 4
Activity: Touch Exploration ........ Page 4
Links & Photos ....................... Pages 5-7

Discover
Stay Curious, Collaborate, Uncover

Artifact of the Day
Stay Curious, Collaborate, Uncover
Early Light Bulbs ..................... Page 9
Links & Photos ....................... Pages 10-11

Create
Design, Learn from Failure
What Can We Make with Metal and Fabric?
Project 1: Greeting Cards ........ Page 12
Project 2: Bookmarks ................. Page 13
Project 3: Bracelets .................... Page 14
Project 4: Toilet Paper Tube Owls .............. Page 15

Inspiring Stories
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Review & Extend
Stay Curious, Collaborate
Ask Students Specific and Open-Ended Questions .......... Page 17
Family Connection ...................... Page 18
Coloring Sheet ......................... Page 19
Let’s Learn About
PAPER & FABRIC

Compare, Contrast, Combine

Ask students to explain the differences they see and feel between paper and fabric. Teachers can provide students with blocks or other items of weight for students to determine which material (paper or fabric) is stronger, more durable, more flexible, etc.

Teachers can show students dollar bills as one way fabric and paper are combined into something we use every day. Ask students if they know what happens when paper alone gets wet and if they have ever seen money that went through their laundry. Have them think about why money doesn’t fall apart from being washed, but regular paper does, so that they can understand that combining fabric with paper makes it stronger.

Activity

Touch Exploration

Provide many different examples of paper and fabric for students to touch and manipulate and to describe what they see and feel.

Teachers can help students discover ways fabric and paper are used in combination, such as in:
- Clothing
- Shopping bags
- Storage boxes (cardboard vs. fabric-lined crates or canvas bags)
- Flocked wallpaper
- Greeting cards

Have students touch and describe what they see and feel with paper bags and reusable shopping bags (those with cardboard sheets to allow to stand, such as from Walmart or Meijer), and think about why they are used together.

What Can Be Made with Paper and Fabric?

Teachers can show students images from history of paper and fabric in papier mache dolls, and is used to make a gasket in a Model A and later cars.

Ask students what they would think about playing with these dolls? Would they have to be extra careful with these? Do they think cars today have paper parts?

Model i Innovation Learning Framework

Stay Curious, Collaborate, Uncover

- Ask questions like what, why, how.
- Talk about helping, working together.
- What do you see (characteristics, properties)? What problems does this material help us solve?

Links and photos for this section are on Pages 5-7.
Let’s Learn About

PAPER & FABRIC

Explore — Links

Papier Mache Doll, 1863-1892

thf.org/collections-and-research/digital-collections/artifact/296513
Let’s Learn About PAPER & FABRIC

Explore — Links

Papier Mache Doll, 1860-1920

thf.org/collections-and-research/digital-collections/artifact/296501
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Explore — Links

Paper Gaskets for Automobile Engine Being Manufactured, 1936
thf.org/collections-and-research/digital-collections/artifact/296585
Let’s Learn About
PAPER & FABRIC

Activity
What Around Our Classroom Is Made of Paper and Fabric?

Students can continue discovering what happens when you combine the two materials by exploring for items around the classroom.

Teachers can be sure that combination items are available around the classroom: items previously explored, fabric-covered books, wall decorations, fabric-covered storage boxes, reusable shopping bags with cardboard-covered bottoms, baseball caps/visors, toys, pull-down classroom maps, book bags, brown paper bags, paper money (real), etc.

Model i Innovation Learning Framework
Stay Curious, Collaborate, Uncover

- Ask questions like what, why, how.
- Talk about helping, working together.
- What do you see (characteristics, properties)? What problems does this material help us solve?
Let’s Learn About
PAPER & FABRIC

Artifact of the Day

What Do Early Light Bulbs Contain?
Teachers should ask students to remember what kinds of materials early inventors experimented with to light our world? Teachers can show pictures of a combination of carbonized cotton thread (fabric) and carbonized cardboard (paper) in filaments designed by Hiram Maxim and Thomas Edison.

Links and photos for this section are on Pages 10-11.

Model i Innovation Learning Framework

Stay Curious, Collaborate, Uncover

- Ask questions like what, why, how.
- Talk about helping, working together.
- What do you see (characteristics, properties)? What problems does this material help us solve?
Let’s Learn About
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Artifact of the Day — Links

Carbonized Paper Filament Lamp Made by Hiram Maxim, 1880-1881

thf.org/collections-and-research/digital-collections/artifact/196865
Edison Paper Horseshoe Filament Lamp, 1879

thf.org/collections-and-research/digital-collections/artifact/199162
Project 1: Greeting Cards

Materials

- Cardstock
- Fabric scraps
- Crayons, markers or colored pencils (optional)
- Glue
- Scissors

Instructions

1. Cut cardstock to the size desired for finished cards.
2. Cut fabric scraps into various shapes.
3. Allow students to arrange shapes to create pattern on their card.
4. Assist students in gluing scraps to card.
5. Optional: Allow students to color cards or add their own message.
6. Assist students in writing a message on their card if desired.
Let’s Learn About
PAPER & FABRIC
Create — What Can We Make with Paper and Fabric?

Project 2: Bookmarks

Materials

• Cardstock
• Fabric scraps, large enough to cover cardstock strips
• Hole punch
• Yarn or ribbon
• Scissors

Instructions

1. Cut cardstock into rectangles.
2. Glue fabric over rectangle.
3. Punch a hole in one end and add yarn or ribbon ties.

Model i Innovation Learning Framework

Design, Learn from Failure

• Make, build and create.
• Talk about “trying again,” what’s another way to...

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Let’s Learn About

PAPER & FABRIC

Create — What Can We Make with Paper and Fabric?

Project 3: Bracelets

Materials

- Toilet paper tubes
- Fabric scraps
- Glue
- Scissors

Instructions

2. Cut the tube all the way down one side to create an opening to put on the bracelets.
3. Cut bracelets in various sizes from the tube.

Model i Innovation
Learning Framework

Design, Learn from Failure

- Make, build and create.
- Talk about “trying again,” what’s another way to...

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Project 4: Toilet Paper Tube Owls

Materials
- Toilet paper tubes
- Fabric scraps
- Yellow or orange construction paper for beak
- White and black construction paper or googly eyes
- Glue
- Scissors
- Pencil

Instructions
1. Cut a piece of fabric large enough to cover the toilet paper tube.
2. Draw a half oval at the top of the paper tube (use a glass or cookie cutter as a stencil).
3. Cut out the half oval and use as a template to cut an identical half oval from the other side of the same end of the paper tube.
4. Save the cut pieces for wings.
5. Cover the outside of the tube with glue, particularly along the edges.
7. Glue the two half ovals onto the construction paper and cut out.
8. Glue the two half ovals onto the sides of the tube as shown in the photo.
9. Cut out two circles of white construction paper and two smaller circles of black construction paper to make the eyes. Glue the black circles on the white.
10. Glue the eyes to the owl body near the cut-out top.
11. Cut out a small triangle for the beak. Glue triangle with tip down below the eyes.

Model i Innovation Learning Framework

Design, Learn from Failure
- Make, build and create.
- Talk about “trying again,” what’s another way to...
Let’s Learn About
PAPER & FABRIC

Inspiring Stories

Read Stories to Inspire Your Students

What Do You Do With A Chance?
by Kobi Yamada

The Book of Mistakes
by Corinna Luyken

Model i Innovation Learning Framework

Be Empathetic, Learn from Failure

• How did the characters in the stories feel? How might the stories make others feel?
• Talk about “trying again,” what’s another way to...

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Let’s Learn About PAPER & FABRIC

Review & Extend

Ask Students Specific and Open-Ended Questions

- What kinds of things do you think are made with fabric and paper?
- What was your favorite thing about this lesson?
- What happened in the stories?
- What would you make out of fabric and paper?

Family Connection

Send the worksheet on Page 18 home with students to be completed at the end of the lesson.

Coloring Sheet

Have students color the picture on Page 19 as a part of the lesson, or send it home to be colored.

Model i Innovation Learning Framework

Stay Curious, Collaborate

- Ask questions like what, why, how.
- Talk about helping, working together.
Let's Learn About
PAPER & FABRIC

Review & Extend — Family Connection

Take the Learning Home

We are learning about paper and fabric and the way it is used in many items we use every day.

Please take your student on an "I Spy" adventure through your home to see what paper and fabric items you have. What are some of these things?

Have them draw what they find.

These are some of the stories related to our learning. You might enjoy reading them with your student.

Kite Day: A Bear and Mole Story
by Will Hillenbrand

Mindset Matters
by Bryan Smith
Papier Mache Doll, 1860-1920